

# **Prof. Laith Naser Al-Eitan**

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**Jordan University of Science and Technology**

**Professor of Human Genetics and Pharmacogenetics**

**Department of Biotechnology and Genetic Engineering**

**Fulbright Scholar | Research Fellow, DTRA | Visiting Scholar – MIT, LANL, SNL**

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## Personal profile

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Prof. Al-Eitan is a Professor of Molecular Human Genetics and Pharmacogenetics in the Department of Biotechnology and Genetic Engineering at Jordan University of Science and Technology (JUST) with a Ph.D. in Molecular Human Genetics and Pharmacogenetics from the University of Western Australia, Fellowship in Biological Threat Reduction/Virology from The Defense Threat Reduction Agency (DTRA), USA and UK, and Post-Doctoral from the Massachusetts Institute of Technology (MIT, USA), at the MIT Department of Biology and the MIT Whitehead Institute for Biomedical Research. Currently, I am working as a Professor in the Department of Biotechnology and Genetic Engineering at Jordan University of Science and Technology (JUST) with a Ph.D. from the University of Western Australia. At JUST, I have been promoted recently to a Full Professor with one-year seniority (Exceptional Promotion) and I served as a Head of Biotechnology and Genetic Engineering Department. I have also served as the Director of the Princess Haya Biotechnology Center, where I was the project manager for a number of biorisk (Biological Threats Reduction, Biosafety and Biosecurity) and molecular biology workshops in collaboration with Sandia National Laboratories and the Canadian Department of Foreign Affairs, Trade, and Development. These workshops were offered to a large number of Egyptian, Iraqi, Jordanian, Libyan, and Yemeni professionals. I was recently awarded the Jordanian Fulbright Scholar Research Award (Post- Doctoral) as a Visiting Professor at the Massachusetts Institute of Technology (MIT). I had the opportunity working (2022-2023) on research at the MIT Department of Biology and the MIT Whitehead Institute for Biomedical Research to combine genome analysis, classical and next-generation genomic methods, and address novel topics at the crossroads between epigenetics, genomics, bioinformatics analyses, and infectious diseases (e.g., SARS-CoV-2, Zika, Ebola, Dengue and West Nile).

I recognize the critical importance of internal and external, multi-disciplinary partnerships in advancing scientific research. As a Cooperative Threat Reduction (CTR) Biosciences Fellow on sabbatical in the UK, I joined an international team studying lyssaviruses and other bat-borne viruses using bioinformatics tools. My research collaborations span institutions including JUST, King Abdullah University Hospital, King Hussein Medical Centre, Hashemite University, University of Jordan, King Khalid University (Saudi Arabia), APHA (UK), University of California Santa Cruz, and University of Charleston (USA). As principal investigator, I've secured over JOD 557,000 (~USD 788,000) in funding from JUST, the Jordanian Scientific Research Support Fund, and Canada's Cooperative Biological Engagement Program. I have also completed extensive training from institutions such as JUST, ISESCO, the Jordanian Royal Scientific Society, Los Alamos National Laboratory, and Sandia National Laboratories. Dedicated to mentoring the next generation of scientists, I've supervised more than 60 master's students and 17 undergraduates in human genetics and pharmacogenetics, most of whom have published their research in reputable journals. With 190+ publications over the past decade, my work focuses on the genetic landscape of Jordan's ethnic communities, aiming to support personalized medicine and improve healthcare through locally relevant, bioinformatics-driven research.

## Highlights

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- Professor of Biotechnology and Genetic Engineering at Jordan University of Science and Technology (JUST).
- Former Head of the Department of Biotechnology and Genetic Engineering at JUST
- Former Director of the Princess Haya Biotechnology Center at JUST, managing 16 advanced research laboratories
- Fulbright Postdoctoral Fellow at the Whitehead Institute, MIT, USA.
- Served as Research Fellow under the U.S. Department of Defense's Cooperative Threat Reduction program, USA and UK.
- Received full promotion to Full Professor on an accelerated track with seniority, marking a historic first since the establishment of the Faculty of Science and Arts at Jordan University of Science and Technology (JUST).
- Acknowledgment appreciation certificate by the President of Jordan University of Science and Technology for being among the top 2% of the researchers worldwide from Elsevier
- Ali Mango Award for Distinguished Researcher (2023) – Scientific Faculties category.
- Recognized among the top 2% of scientists worldwide by Stanford University and Elsevier (2021).
- Received international honors, including a gold medal from the U.S. Department of Defense.
- Secured significant national and international research funding, including the largest JUST research grant in 2025/26 for transcriptomics and metabolomics in lung cancer research
- Secured at JUST over \$500,000 in internal research funding as Principal Investigator, \$389,000 as a Co-Investigator, and more than \$580,000 in combined national and international research grants.
- Published 197 peer-reviewed scientific papers in genetics, pharmacology, and personalized medicine in top-tier journals
- Ranked among the top 2% of scientists worldwide for the past 4 years (2021-2025) by Stanford University's Q-index based on bibliometric impact from Scopus data
- Holds a citation record of ~1707, an h-index of 23, and a g-index of 23, placing him in the top 2% of researchers worldwide.

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## Education

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### **Post-Doctoral Fulbright Scholar**

Massachusetts Institute of Technology (MIT), *Cambridge, United States. (2022-2024)*

Fulbright Professor - Postdoctoral Scholar

### **Cooperative Threat Reduction (CTR)**

Biosciences Fellowship Program, *Washington, United States. (2020)*

Research Fellowship | The Defense Threat Reduction Agency (DTRA)

### **Ph.D. in Molecular Human Genetics and Pharmacogenetics**

University of Western Australia, *Perth, Australia. (2012)*

Ph.D. Graduate | Molecular Genetics and Pharmacogenetics

### **Master of Science (M.Sc.) in Toxicology and Forensic Science**

Jordan University of Science and Technology, *Irbid, Jordan. (2007)*

Graduate Student | Toxicology and Forensic Science

### **Bachelor of Science (B.Sc.) in Genetic Engineering and Biotechnology**

Jordan University of Science and Technology, *Irbid, Jordan. (2004)*

Graduate Student | Genetic Engineering and Biotechnology

## Experiences

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<b>Fulbright Professor (Post-Doctoral Scholar)</b> Massachusetts Institute of Technology (MIT)	2022 – 2024
<b>Professor of Human Genetics and Pharmacogenetics</b> Jordan University of Science and Technology (JUST)	2021 – <i>Present</i>
<b>Head of the Department of Biotechnology and Genetic Engineering</b> Jordan University of Science and Technology (JUST)	2021 – 2022
<b>Associate Professor of Pharmacogenetics and Human Genetics.</b> Jordan University of Science and Technology (JUST) Department of Biotechnology and Genetic Engineering	2017 – 2021
<b>Coordinator, Forensic Science Undergraduate Program</b> Jordan University of Science and Technology (JUST) Department of Forensic Science	2013 – 2016
<b>Director, Princess Haya Biotechnology Center</b> Jordan University of Science and Technology (JUST) King Abdullah University Hospital (KAUH)	2013 – 2014
<b>Research Scholar Visiting</b> Sandia National Laboratories (SNL) New Mexico, United States	2014
<b>Assistant Dean, Faculty of Science and Arts</b> Jordan University of Science and Technology (JUST)	2013
<b>Research Assistant at Forensic Science Center</b> The University of Western Australia	2009 – 2012
<b>Visiting Research Scholar</b> Los Alamos National Laboratory (LANL)	2010
<b>Trainee at Forensic Science Laboratory</b> Jordan Public Security Directorate (PSD)	2005 – 2008

## Academic and Curriculum Development Programs

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- Scientific Research Design and Methodology (09 – 11) Oct 2018
- Curriculum and Academic Program Development (17 – 18) Jan 2018
- Modern Teaching Methods and Pedagogical Strategies (14 – 15) Jan 2018
- Introduction to Problem-Based Learning (PBL) 10 Jan 2018
- Designing and Delivering Online Learning (08 – 09) Jan 2018
- Innovative Teaching Techniques and Learning Styles (22 – 23) Feb 2017
- Curriculum and Study Plan Design (21 – 22) May 2013
- Assessment and Evaluation of University Exams (19 – 22) May 2013
- E-Learning Platforms and WebCT Integration 08 Jan 2013
- Contemporary Instructional Approaches in Higher Education (06 – 07) Jan 2013
- Data Analysis Using SPSS (17 – 18) Oct 2012

## International Training and Workshops

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<b>Biorisk Management Curriculum Development Workshop</b> USA Defense Threat Reduction Agency (DTRA), University of Connecticut	<i>(06 – 10) Feb 2022</i>
<b>Rule of Law and Justice Systems</b> German Embassy, Jordan	<i>(19 – 20) Dec 2020</i>
<b>Lab Safety for Animal Facility Workers</b> Animal and Plant Health Agency (APHA), UK	<i>07 Apr 2020</i>
<b>Lab Management: Health and Safety Protocols</b> APHA, UK	<i>25 Mar 2020</i>
<b>Containment Procedures and Facility Safety</b> APHA, UK	<i>22 Jan 2020</i>
<b>Biosafety and Biosecurity in Life Sciences Research</b> Islamabad, Pakistan	<i>(26 – 28) Apr 2016</i>
<b>Research Ethics and Bioethics Training</b> ISESCO and Jordan Ministry of Education, Amman	<i>(05 – 07) Oct 2015</i>
<b>Global Biorisk Management Training Program</b> Princess Haya Biotechnology Center and Canadian CBEP	<i>2013 – 2014</i>
<b>BIO-OPERATE: Best Practices in Biorisk Management</b> DG DEVCO, Amman, Jordan	<i>(05 – 06) May 2014</i>
<b>NGS and Bioinformatics Intensive Workshop</b> Los Alamos National Laboratory, USA	<i>(26 May – 07 Jun) 2014</i>
<b>Global Biorisk Management Curriculum Workshop</b> Sandia National Laboratories, USA	<i>(16 – 19) Feb 2014</i>
<b>Train-the-Trainer: Biosafety and Biosecurity Course</b> RSS and AAAS, Amman, Jordan	<i>(19 – 21) Nov 2013</i>
<b>Genomics and Data Management Workshop</b> Los Alamos National Laboratory, Istanbul, Turkey	<i>(13 – 17) Dec 2013</i>



## Academic Teaching

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### My Teaching Philosophy

As I advanced in my scientific career, I continued to believe that teaching combines knowledge, skill, fun, excitement, passion, and compassion. I am always dedicated and committed to improving myself and my students. To be an effective instructor, I must employ various strategies to create a safe and caring environment that encourages students to express themselves and speak their minds, embracing the differences among them. I believe that all students are unique and should not be taught in the same way. Therefore, to assess their learning abilities, various types of assessments are used. Teaching graduate and undergraduate students provides me with the opportunity to ensure they understand the basic concepts essential for their campus life and, even more importantly, for their future outside of college, helping them become stronger, more confident, and effective individuals in their families and communities.

### Taught Courses:

- **M.Sc. in Applied Biological Sciences**
  - (BIO 732) Advanced Pharmacogenetics and Drug Safety
  - (BIO 742) Advanced Molecular Biology
  - (BIO746) Molecular Diagnosis of Genetic Disease
  - (BIO 735) Advanced Toxicology
  
- **M.Sc. in Toxicology and Forensic Science**
  - (MED780) Laboratory in Molecular Biology and Biotechnology
  - (MED 787) Chemical Toxicology
  - (MED 765) Cellular and Molecular Toxicology
  
- **B.Sc. in Genetic Engineering and Biotechnology**
  - (BIO 98) Basics in Biology
  - (BT 101) General Biology
  - (BT 102) General Biology
  - (BT 103) General Biology
  - (BT 104) General Biology
  - (BT335) Biosafety and Biosecurity
  - (BT 437) Pharmacogenomics

- (BT 455) Application of Biotechnology in Medicine
- (BT 433) Virology
- (BT433) Virology Laboratory
- (BT 451) Molecular Biology I
- (BT 454) Molecular Biology II

- **B.Sc. Forensic Sciences**

- (BT 399) Field Training B.Sc. in Forensic Sciences
- (FSC 311) Introduction to Forensic Sciences
- (FSC 421) Introduction to Toxicology
- (FSC 422) Analytical Toxicology
- (FSC 423) Analytical Methods in Forensic Science
- (FSC 472) Forensic DNA Profiling and DNA Fingerprinting
- (FSC 399) Field Training
- (FSC 492A) Selected Topics in Forensic Science (A)

## Research

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Master's thesis	Profiling of Seized Heroin in Jordan by Chromatographic Techniques, JUST, Jordan.
Doctoral dissertation	Pharmacogenetic Characteristics of Substance Abuse Patients who are Receiving Therapy for their Addiction, UWA, Australia
Followship	Cooperative Threat Reduction (CTR) Biosciences Fellowship Program (DTRA, USA and APHA, UK).

### Details:

I was involved in three projects during my fellowship at the Virology Department at Animal and Plant Health Agency (APHA), Surrey, the UK, in 2020:

1. "Whole-genome sequencing and phylogenetic analysis of rabies viruses from Jordan".
2. "Bat-borne coronaviruses in the Eastern Mediterranean: A threat to public health".
3. "Creating Biosafety and Biosecurity Curriculum for Undergraduate Students".

*Post-Doctoral Fulbright Scholar, Massachusetts Institute of Technology (MIT)*

*Country: United States, Website: <https://www.mit.edu/>*

## Research Interests

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1. Exploring the genetic susceptibility using different bioinformatics tools and multiple software systems and differences of certain conditions including breast cancer, lymphoblastic leukemia, epilepsy, autism, schizophrenia, multiple sclerosis, alopecia areata, diabetes type 2, asthma and other genetic diseases in the Jordanian population.
2. Studying the responsiveness status of their prescribed pharmacological drugs based on the genetic variability using different bioinformatics tools and multiple software systems. Elucidating the pharmacogenomic and pharmacogenetic characteristics of the ethnic communities within Jordan.
3. Analyzing large-scale genomic data (Next generation sequencing data of human genome and viral genome) using different bioinformatics tools and multiple software systems

## Grants Internal Research Grants-Deanship of Research/JUST AS PI

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### (2025):

- Genetic association of polymorphisms in the ADRA1A, CDHR5, TPH1, and TPH2 genes with substance abuse in Jordanian males.  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40
- Genetic variants associated with vitamin D as predictive biomarkers for breast cancer in Jordanian women  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40

### (2024):

- Transcriptomic and metabolomic analysis of lung cancer cells affected by synthetic cannabinoids  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$97,000
- Aca gene polymorphisms and hypertensive susceptibility in the Jordanian population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40

### (2022):

- Effects of synthetic cannabinoids 5-Fluoro ADBICA and MDMB-FUBINACA on brain angiogenesis and the expression of vascular endothelial growth factors, angiopoietin-1, and angiopoietin-2  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40
- Bioinformatics analysis of environmental epigenetic profiles across populations exposed to pollution and stress  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40
- Relationship between polymorphisms in NOS3, NOS1AP, REN, PLA2G4A, TCF7, L, ADRB1, and PTPRD with hypertension in the Jordanian Arab population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40
- Important genetic variations associated with genetics Pharmacokinetics between healthy individuals and those with bipolar disorder in Jordan.  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- Genetic association of polymorphisms in the genes (PTTG1AB) and (ABPC3B) with breast cancer susceptibility  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.

- Effect of the synthetic cannabinoids EMB-FUBINACA and AB-CHMINACA on the roles of vascular endothelial growth factor, angiopoietin-1, and angiopoietin-2 in cerebral angiogenesis  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40
- Effect of synthetic cannabinoids on angiogenesis: The role of 5-fluoro-NNEI in HBEC-5i cells.  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40
- Molecular and pharmacological identification of the synthetic cannabinoids AB-FUBINACA and 5-fluoro-ABICA and their effects on cerebral angiogenesis.  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40

**(2021):**

- Studying the effect of fibroblast growth factor receptor 1 and mutations in the receptor gene on glycemic control in diabetic patients in the Jordanian population.  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40
- Association of NOS3, NPRC, and NPPB gene variants with hypertension in the Jordanian population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40
- Genetic polymorphisms in Jordanian breast cancer patients: a genetic association study  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40

**(2020):**

- Pharmacogenomics of genetic polymorphisms within genes responsible for susceptibility to SARS-CoV-2 and drug metabolism genes used in treatment  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40
- Genetic association of genes (SP2AR1, DP, and SP27B1) with the vitamin D metabolic pathway in multiple sclerosis patients in the Jordanian population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40
- Pharmacogenomics of hypertension treatment in Jordan.  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$9014.40
- Pharmacological and biochemical impacts of the endocannabinoid system receptors on the brain angiogenesis in vitro  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount JD: \$1410.45.
- Pharmacogenomics of Jordanian hypertensive patients  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.

**(2018):**

- Genetic polymorphisms in DRD4 and their association with bipolar disorder in the Jordanian population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- Synergistic effect of YM155 and 5-fluorouracil on colon cancer cells: Interaction through the survivin molecule  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- Genetic VNTR polymorphisms of DRD4 gene and their associations with bipolar disorder susceptibility in a Jordanian Arab population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- Genetic Characteristics of breast cancer patients in Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$6664.40
- Genetic polymorphisms of pharmacogenomic VIP variants within healthy individuals and bipolar patients in Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$14,069.29.

**(2017):**

- Pharmacogenetic characteristics of epilepsy patients in Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- Molecular genetics of alopecia areata and related phenotypes in Jordanian populations  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- Global gene expression profiling of warts caused by human papillomavirus in a Jordanian population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- Genome-wide DNA methylation profiling of site-matched warts and healthy skin biopsies in a Jordanian population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$14,104.55.
- Genetic VNTR Polymorphisms of XRCC5, SMYD3 and IL-4 genes and their associations with breast cancer susceptibility in a Jordanian Arab population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$14,104.55.
- Polymorphisms of CYP2C9 and GGCX genes and their associations with warfarin treatment response"  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$14,104.55.

- Evaluation of forensic genetic efficiency parameters of 21 autosomal STR markers among genetically isolated populations in Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$7757.50.
- Pharmacogenetic characteristics of multiple sclerosis patients in Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$17,630.69.
- Pharmacogenetic characteristics of epileptic patients in Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$10,042.44.

**(2016):**

- Molecular genetics of schizophrenia and related phenotypes in Jordanian population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$8815.34.
- Genetic polymorphisms of pharmacogenomic VIP variants in the Circassian population from Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- Prevalence of common CFTR single-nucleotide polymorphisms in the Circassian population in Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9,155.25.
- Investigation on the cytogenetic effects of psychotic drugs: What are we missing  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9026.91

**(2015):**

- Developing a DNA genotyping and enzymatic analysis method for genetic metabolic disorders in Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$14,104.55.

**(2014):**

- Genetic analysis of SH2B1 gene polymorphisms in type 2 diabetes patients and their associations in Jordanian Arab population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$8392.21.
- Sunscreen safety level determination: screening and profiling of non-allowed pharmacological substances and determining their level of toxicity in Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9132.70.
- Association of OPRD and OPRK Genes with heroin addiction in Jordanian Arab population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9132.70.

- Pharmacogenetic characteristics of cardiovascular disease patients of Jordanian population treated with warfarin  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9132.70.
- Pharmacogenetic characteristics of breast cancer patients in Jordan: optimizing tamoxifen drug treatment  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9132.70.
- Screening of 24 STR loci among Jordanians  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$21,156.83.
- A study of genetic factors for autism in Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9,310.19.
- Pharmacogenetics Characteristics of Breast Cancer Patients in Jordan: Optimizing Tamoxifen Drug Treatment  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9,120.04.
- Profiling and investigating of the level of BTEX in soil and blood employees of the Jordanian gasoline station  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9,120.04.
- Screening and profiling of non-allowed pharmacological substances, and determined their level of toxicity by using Liquid Chromatography Coupled to Tandem Mass Spectrometric Detector (LCMS/MS)  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$11,213.12.

**(2013):**

- The Role of genetics in the etiology of schizophrenia in Jordanian population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$8815.34.
- Pharmacogenetics characteristics of type 2 diabetes patients (T2D) in Jordan treated with metformin  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$21,156.83



## Grants Internal Research Grants-Deanship of Research/ JUST AS CO-PI

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### (2020):

- Evaluation of the Protective effect of Vitamin E on possible genotoxicity induced by nedaplatin  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9,155.25.
- Evaluation of the possible protective effect of vitamin B12 on chromosomal damage induced by carbamazepine in human lymphocyte  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9,155.25.
- Investigation of the effect of synthetic cannabinoids on DNA of human lymphocytes  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9,155.25

### (2018):

- Aspirin resistance in ischemic patients: new paradigm for pharmacogenomic analysis”  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$8098.88.

### (2017):

- Genetic association of candidate single-nucleotide polymorphisms and gene expression with high-grade glioma susceptibility and treatment response  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$13,963.50.
- Prevalence of anxiety and depression among hemodialysis patients and their associations with 5-HTT, BDNF, NPSR1, and IL-6 gene polymorphisms  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$14014.58.
- The effect of lead (Pb) on the physiological, biochemical and ultrastructural properties of Leucaena leucocephala  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9,155.25.
- Genetic association of candidate single nucleotide polymorphisms and gene expression with non-hodgkin lymphoma susceptibility and treatment response  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$13,822.46.
- Genetic association of candidate single nucleotide polymorphisms and gene expression with acute myeloid leukemia susceptibility and treatment response  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$11,988.87.

- Role of oxidative stress in melatonin effect in reversing learning and memory impairment induced by high-fat diet  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- The effect of androgen treatment on the gene expression and function of cardiac neurotrophins  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- Evaluating the protective effect of vitamin E on genotoxicity induced by cisplatin in human lymphocytes  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$8521.43.

**(2016):**

- Effect of magnetized water on the growth and development of Tobacco (*Nicotiana tabacum* var. Turkish)  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- Effect of iron oxide nano-particles on the photosynthetic parameters in *Nicotiana Tabacum*  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$140,850.00.
- Genetic Analysis of candidate genes of glaucoma in Jordanian population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9,155.25

**(2015):**

- Detection of quinolone resistance genes in urinary *Klebsiella Pneumoniae* isolates from Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$8,169.30
- Compliance to ionizing radiation protection procedures and its effect on the received radiation dose among medical radiation workers  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$4,577.63.
- Genetic association of PAX9 Gene polymorphisms with Peg-shaped tooth disorder in a Jordanian Arab population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- Genetic association of MSX1 gene polymorphisms with Peg-shape tooth disorder in Jordanian population  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.
- In vitro investigation of the antibacterial activities of some flourquinolones against *Pseudomonas Aeruginosa* biofilms  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$9167.96.

**(2014):**

- Genetic diversity and structure in Jordanian goats analyzed by newly developed SNP markers  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$14,104.55.
- Determination of heavy and trace metals in the Dead Sea water and mud  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$13,803.30.

**(2013):**

- Pharmacogenetics' characteristics of asthma patients in Jordan  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$21,156.83.
- Evaluation of DNA damage induced by phosphodiesterase inhibitors (PDEs) in human cultured lymphocyte  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$7052.27.
- The biochemical and physiological effects of different concentrations of caffeine on tobacco plant (N. tabacum var. Turkish) and on the systemic movement of RNA viruses  
Sponsor/Agency: Jordan University of Science and Technology.  
Amount: \$8815.34.

## **National and International Grants**

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- **(2025 – 2026): Transcriptomics and Metabolomics Analysis of Synthetic Cannabinoids Effects on Lung Cancer Cell Line.** Sponsor/Agency: Scientific Research and Innovation Support Fund (Ministry of Higher Education and Scientific Research). Amount: \$136,850
- **(2018 – 2021): Pharmacogenetic approach to treating drug addiction: Genetic predictors for drug addiction development, treatment response and dosing.** Ministry of Higher Education and Scientific Research.  
Sponsor/Agency: Scientific Research Support Fund of the Jordanian. Amount: \$93,795.2
- **(2013): Biorisk Management Workshops for Healthcare Professionals in Jordan as Princess Haya Biotechnology Center Director. Led three national workshops in collaboration with Sandia National Laboratories.**  
Sponsor/Agency: Cooperative Biological Engagement Program, Canadian Department of Foreign Affairs, Trade and Development.  
Amount: ~\$350,000

## Publications

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1. **AL-Eitan L.N.**, Almahdawi DL, Abu Khiah RA, Alghamdi MA. Bridging Gaps in Vaccine Access and Equity: A Middle Eastern Perspective. *Vaccines*. 2025; 13(8):806. <https://doi.org/10.3390/vaccines13080806>.
2. **AL-Eitan, L.N.**, Tarkhan, A.H., Ali, H.O. *et al.* Investigating the genetic landscape of cancer in Jordan: a step toward personalized care. *Eur J Med Res* 30, 544 (2025). <https://doi.org/10.1186/s40001-025-02799-7>.
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## Sequence Deposition

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- **Transcriptome analysis of HPV-induced warts and healthy skin in humans:**  
Data deposited to NCBI's Gene Expression Omnibus (GEO) under the GEO accession number of GSE136347.
- **Sequencing resulted of rabies isolates from stray dogs and foxes from different regions of Jordan were covered the five lyssavirus genes for all seven genomes**  
The whole genome sequences were submitted to ENA (accession no. PRJEB41551).

## Conferences and Seminars

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- **France, 09/2019**
  - Polymorphism in pro-inflammatory and immune-related genes in diffuse large B cell lymphoma susceptibility and overall survival in Arab descent population: A case-control study.  
Conference: VIRCHOWS ARCHIV-31st EUROPEAN CONGRESS OF PATHOLOGYA
  - Small nuclear RNA (RNU6-1) is a novel susceptibility gene for diffuse large B cell lymphoma in Arab descent population: A case-control study.  
Conference: VIRCHOWS ARCHIV - 31st EUROPEAN CONGRESS OF PATHOLOGY
- **Abu Dhabi, UAE; 14/11/2017 – 16/11/2017**
  - "Profiling of seized synthetic cannabinoid in Jordan by GCMS," Gulf Cooperation Council (GCC) Forensic Science Conference and DNA Symposium."
  - "Evaluation of forensic genetic efficiency parameters of 22 autosomal STR markers (PowerPlex®Fusion system) in a population sample of Arab descent from Jordan," Gulf Cooperation Council(GCC) Forensic Science Conference and DNA Symposium
- **Antalya, Turkey; 19/10/2016 – 24/10/2016**
  - "Association of mu-opioid receptor (OPRM1) genetic polymorphisms with treatment outcome in opiate dependent individuals of Arab descent," The Australian Society for Medical Research (ASMR) Symposium.
  - "The effects of olive mill wastewater on soil microbial populations,"3rd International Conference on Computational and Experimental Science and Engineering"

- **Islamabad, Pakistan; 26/04/2016 – 28/04/2016**  
 “Emergence of biosecurity, biosafety and bioethics in academic medicine and public health in developing countries: Jordanian experience as an example,” COMSATS-ISESCO Regional Workshop on 'Biosafety and Biosecurity in Life Sciences Research’”
- **Antalya, Turkey; 14/01/2015 – 19/10/2015**
  - “Impact of exogenous caffeine on the physiological, biochemical, and ultra-structural characteristics in Tobacco (*Nicotiana* var. Turkish),” 2nd International Conference on Computational and Experimental Science and Engineering
  - “A case-control study for genetic susceptibility genes for type 2 diabetes with history of obesity in Jordanian population,” 2nd International Conference on Computational and Experimental Science and Engineering.
- **Amman, Jordan; 12/08/2015 – 13/08/2015**
  - “A genome-wide association study for type 2 diabetes susceptibility gene and treatment in Jordanian population of Arab descent,” Jordanian Scientist and Technologist Conference on Employing Science and Technology and Innovation for Economic Development.
  - “Pharmacogenomics: A promising approach towards treatment of autism,” The First Regional Conference of Autism: Diagnosis, Treatment, and Rehabilitation.
- **Dubai, UAE; 2014**
  - “Screening of 24 STR Loci among Jordanian population,” Middle East Molecular Biology Sources (MEMBS) Congress”
  - “Screening of ARSB Gene mutation among Jordanian population,” Middle East Molecular Biology Sources (MEMBS) Congress”
  - “Phenotype and genotype for Niemann Pick A/B disease in Jordanian population,” Middle East Molecular Biology Sources (MEMBS) Congress”
  - “Phenotype and genotype for biotinidase deficiency disease in Jordanian population,” Middle East Molecular Biology Sources (MEMBS) Congress”
  - “Biorisk management, genomics capabilities and engagement in MENA region moving towards globalization,” Middle East Molecular Biology Sources (MEMBS) Congress”
  - “Emergence of pharmacogenomics in academic medicine and public health in Jordan: History, present state and prospects,” Middle East Molecular Biology Sources (MEMBS) Congress”

- **Florence, Italy;** 02/02/2012 – 05/02/2012
  - “Polymorphisms in the  $\mu$ -opioid receptor gene in Jordanian Arabs with opiate drug dependence”, The Up Close and Personalized, International Congress on Personalized Medicine
- **Sydney, Australia;** 11/03/2012 – 14/03/2012
  - “Custom genotyping for substance addiction susceptibility genes in Jordanian of Arab descent”, The Human Genome Meeting (HGM) in Genetics and Genomics in Personalized Medicine
- **Western Australia, Australia;** 2011
  - “Serotonin transporter promoter region (5- HTTLPR) and rs2553] markers as a treatment predictor in Jordanian patients,” The Australian Society for Medical Research (ASMR) Symposium
- **Amman, Jordan;** 05/09/2006 – 08/09/2006
  - “Trends of people involved in court cases for illicit drugs of abuse, in Jordan,” The First Jordanian International Conference on Forensic Sciences and Medicine.
  - “Preliminary profile of seized heroin in Jordan (from 2004 to 2005) by thin layer chromatography,” The First Jordanian International Conference on Forensic Sciences and Medicine

## Honors and Awards

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- The Ali and Samia Menko Prize by Prof. Adnan Badran. The University of Jordan and the Hamdi Menko Center for Scientific Research Awarded 2023 – 2024
- Post-Doctoral Fulbright Scholar, Massachusetts Institute of Technology (MIT) 2022
- Acknowledgment appreciation certificate by the President of Jordan University of Science and Technology for being among top 2% of the researchers worldwide from Elsevier 2021
- Cooperative Threat Reduction (CTR) Biosciences Fellowship Program, International scholarship postdoctoral fellowship from The Defense Threat Reduction Agency (DTRA-USA), United States 2020
- Award for attending the Regional Workshop on Biosafety and Biosecurity in Life Sciences Research in Islamabad, Pakistan from Commission on Science and Technology for Sustainable Development in the South (COMSATS) Headquarters 04/2016
- Listed in Marquis Who's Who in the World 2014 and 2015
- Gold Medal from US Department of Defense, for improving upon the strategic capacity and capability of Biological, Chemical, and Toxicological Risk Management in Jordan 02/2014
- Listed in Who's Who in Higher Education of Science. 2013
- Convocation Postgraduate Travel Award to attend the Up Close and Personalized International Congress on Personalized Medicine in Florence, Italy from University of Western Australia 01/2012
- Postgraduate Research Award to attend the Human Genome Meeting on Genetic and Genomics in Personalized Medicine in Sydney, Australia, from the University of Western Australia 09/2011
- Fully funded PhD Scholarship study at the University of Western Australia from Jordan University of Science and Technology 09/2009

## Professional Services

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**As a Director of the Princess Haya Biotechnology Center, I was the project manager of the following workshops in collaboration with Sandia National Laboratories:**

- Obtained three funds from the Cooperative Biological Engagement Program of the Canadian Department of Foreign Affairs, Trade and Development to conduct three workshops on Biorisk Management for health care professionals in Jordan. *17-28 Aug 2014*  
Amount: ~ USD \$350,000.00.
- Laboratory Equipment Maintenance and Repair for Egyptian and Yemeni participants *11-18 Aug 2014*
- Biorisk Management Training Development program for Yemeni participants. *3-14 Aug 2014*
- Fundamentals of PCR Methods course for 20 Iraqi biomedical professionals. *16-26 Jun 2014*
- Biorisk Management course for Jordanians. *8-19 Jun 2014*
- PCR workshop *1-12 Jun 2014*
- Global Biorisk Management Curriculum course for Libyan participants *19-20 Dec 2014:*
- Biorisk Management Course for 20 Iraqi biomedical professionals *19-30 Dec 2014*
- Intermediate PCR Workshop for Iraqi participants. *17-28 Nov 2013*
- Advanced PCR Workshop for Yemeni participants. *19 Oct-12 Nov 2013*
- Intermediate PCR Workshop for Libyan participants *19 Oct-12 Nov 2013*



## Scientific Services and Committees

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- **(2012 – Current):**

- Served in various committees at the Department, Faculty, and University levels, including Scientific Research and Higher Education, Quality and Academic Accreditation, Grade Reviewing, Internet and Computer, Tenders Committee, General Safety, and others

- **(2013):**

Served as a Member in the improvement of the Forensic Science Syllabus at the Faculty of Science and Arts

- **(2013 – 2014):**

- Participated in community programs and gave lectures on Substance Abuse, Pharmacogenomic Application in Personalized Medicine, and Forensic Toxicology for the general public.
- Played an important role as Director of Princess Haya Biotechnology Centre (PHBC) and Project Manager in establishing the MENA BioRisk Management Training Division and MENA Genomics Training Division at PHBC, Jordan University of Science and Technology
- Training Division and MENA Genomics Training Division at PHBC
- Writing and designing the first edition Brochure for the PHBC and the Training Centers in Collaboration with Public Relation Unit
- Designing and Writing Material for PHBC website in collaboration with computer Centre at JUST

- **(2014):**

- Conducting multiple workshops in Molecular Diagnosis (1st, 2nd, 3rd levels in PCR) and Global Biorisk Management Curriculum (1st, 2nd, 3rd levels in GBRMC).
- Signing agreements with different countries (UK, USA, and Canada) for collaboration to conduct workshops in Biorisk Management and PCR Molecular Diagnosis at National and International level
- Conducting a collaboration with Sandia National Lab (SNL) and Los Alamos National Laboratory (LANL) to train PHBC staff to get experience in Biorisk Management and Next Generation Sequencing (NGS) techniques.
- Writing the first Draft of Strategic, Operational, and Sustainability Plan for the MENA BioRisk Management Training Division and MENA Genomics Training Division to be signed by the President of JUST

- **(2015 –2018):**

- Co-investigator in the Project entitled “The research ethics education program in Jordan” supported by Division of Global Health, University of California, San Diego, USA.

## Professional Affiliations

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### Member of the following organizations and societies:

- Human Genome Organization (Member)
- Middle East Molecular Biology Sources (MEMBS) (Advisory board member)
- Journal of Pharmacogenomics and Pharmacoproteomics (Editorial board member)
- PLOS One (Editorial board member)
- Heliyon, Cell Press Publisher (Academic Advisory Board member)
- Jordan Journal of Biological Sciences (JJBS) (Editorial board member)
- Pharmacology of Anti-Cancer Drugs -Frontiers (Editorial board member)
- Pharmacogenomics Research Network (PGRN) (Member)
- Virology Society (Member)
- American Chemical Society (Member)

## Academic Contributions

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### A reviewer in the following journals:

- Acta Biochimica Polonica
- Aging
- American Journal of Human Genetics
- American Journal of Medical Genetics Part B Neuropsychiatric Genetics
- Asian Biomedicine
- Australian Journal of Forensic Sciences
- Basic and Clinical
- Pharmacology and Toxicology
- Biological Research
- BioMed Research International
- BMC Genetics
- Brain and Behavior
- Breast Cancer Research and Treatment
- Cancer Research
- Clinical Cancer Research
- Current Biomarkers
- Current Biotechnology
- Current Cancer Drug Target
- Current Diabetes Reviews

- Current Drug Abuse Reviews
- Current Genomics
- Current Pharmacogenomics and Personalized Medicine
- Diabetes Technology and Therapeutics
- Epilepsy Research
- Expert Opinion on Biological Therapy
- Expert Review of Anticancer Therapy
- Future Cardiology
- Future Oncology
- Gene Journal
- Gene Reports
- International Neuropsychiatric Disease Journal
- Jordan Journal of Agricultural Sciences
- Jordan Journal of Biological Sciences
- Jordan Journal of Pharmaceutical Sciences
- Journal of Asthma
- Journal of Autism and Developmental Disorders
- Journal of Bioanalysis and Biomedicine
- Journal of Cardiovascular Pharmacology and Therapeutics
- Journal of Clinical Laboratory Analysis
- Journal of Dermatology and Skin Science
- Journal of Forensic Science and Medicine
- Journal of Human Hypertension
- Journal of Immigrant and Minority Health
- Journal of International Medical Research
- Journal of Pharmaceutical and Biomedical Analysis
- Journal of Pharmaceutical Research International
- Journal of Pharmacy and Pharmacology
- Meta Gene
- Molecular Biology Reports
- Neuropsychiatric Genetics
- PLOS ONE
- Saudi Journal of biological sciences
- Saudi Pharmaceutical Journal
- the Brazilian Oral Research
- Therapeutic Advances in Chronic Disease

## Research Collaborators

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- Prof. Gary Hulse, The University of Western Australia, Australia
- Dr. Aymen Shatnawi, University of Charleston, USA
- Dr. David Garcia, University of California, Santa Cruz, USA
- Dr. Habiba Alsafar, Khalifa University, UAE
- Dr. Rame H. Khasawneh, Royal Medical Services, Jordan
- Dr. Rana Dajani, The Hashemite University, Jordan
- Dr. Loai Alzghoul, The University of Jordan, Jordan
- Dr. Rami Alkhatib, Jordan University of Science and Technology, Jordan
- Dr. Nisreen Al-Quraan, Jordan University of Science and Technology, Jordan
- Dr. Basima Almomani, Jordan University of Science and Technology, Jordan
- Dr. Nesreen Saadeh, Jordan University of Science and Technology, Jordan
- Dr. Mazhar AL-Zoubi, Yarmouk University, Jordan
- Dr. Mansour A. Alghamdi, King Khalid University, Saudi Arabia
- Prof. Fouad Al-Momani, Jordan University of Science and Technology, Jordan
- Dr. Rasheed Ibdah, Jordan University of Science and Technology, Jordan
- Dr. Nasr Alrabadi, Jordan University of Science and Technology, Jordan
- Dr. Denise A Marston, Animal and Plant Health Agency, UK
- Dr. Guanghui Wu, Department for Environment, Food and Rural Affairs, UK.
- Dr. Lorraine M Mcelhinney, Animal and Plant Health Agency, UK
- Dr. Anthony R Fooks, Department for Environment, Food and Rural Affairs, UK.
- Dr. Hanan I. Malkawi, Yarmouk University, Jordan
- Dr. Jamil Rusan, Jordan University of Science and Technology, Jordan
- Dr. Loai Alzghoul, University of Jordan, Jordan
- Dr. Sohaib Alkhatib, Jordan University of Science and Technology, Jordan
- Dr. Nour Abdo, Jordan University of Science and Technology, Jordan

## Master Students Supervised

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Hatem Aman (Id: 90770), Genetic Analysis Of Sh2b1 Gene Polymorphisms In Type 2 Diabetes Patients In Jordan And Their Association With Jordanian Arab Population.

Doaa Rababah (Id: 90774), Genetic Polymorphisms Of Gstm1 And Gstp1 Genes And Their Associations With Acute Lymphocytic Leukemia Susceptibility In A Jordanian Arab Population.

Sahar Hbahbeh (Id: 90772), The Role Of Genetics In The Etiology Of Schizophrenia In Jordanian Population.

Mohammed Shatnawi (Id: 98252), Association Of Oprd1 And Oprk1 Genes With Heroin Addiction In Jordanian Arab Population.

Ayah Almasri (Id: 105632), Pharmacogenetic Characteristics Of Cardiovascular Disease Patients Of Jordanian Population Treated With Warfarin.

Reem Jamous (Id: 105634), Genetic Association Of Candidate Genes Brca1, Brca2, Tp53, Dapk1, Mmp-9 Promoter And Tox3 With Breast Cancer In Jordanian Population Of Arab Descent Case-Control Study.

Ibrahim Al Zoubaide (Id: 98248), Family Based Association Study Of Solute Carrier Family 6 Neurotransmitter Transporter Member 4 Slc6a4 Gene Polymorphisms With Autism In Jordan.

Hanan Aljamal (Id: 105631), Sunscreen Safety Level Determination Screening And Profiling Of Sunscreen Ingredients And Studying Their Potential Effects In Mice.

Walaa Alrafai (Id: 105180), Association Of Single Nucleotide Polymorphisms In Drd2, Comt And Htr2a Genes With Schizophrenia In Jordan".

Abdel Qader As'ad (Id: 111543), Profiling Of Synthetic Cannabinoids In Seized Materials In Jordan.

Kareem Shudaifat (Id: 113833), Genetic Association Of Serotonin Transporter Gene Variation With Bipolar Susceptibility In Jordanian Population.

Nizar Darwish (Id: 118780), Evaluation Of Forensic Genetic Efficiencyparameters Of 21 Autosomal Str Markers Among Circassian And Chechen In Jordan.

Amneh Tarkhan (Id: 116086), Gene Expression Profiling Of Warts Caused By Human Papillomavirus In A Jordanian Population.

Rawan Momani (Id: 111429), Genetic Association Of Candidate Genes (Tap1 Cxcl1 Cxcl2 Hspa1b And Tnf-Alpha) With Alopecia Areata And Related Phenotypes In Jordanian Population Of Arab Descent.

Islam Aldalalah (Id: 116371), Pharmacogenetic Characteristics Of Epileptic Patients In Jordanian Population.

Dima Ibrahim (Id: 116221), Genetic Variable Number Tandem Repeat Polymorphisms Of Dopamine Receptor D4 Gene And Their Association With Bipolar Disorder Susceptibility In Jordanian Arab Population.

Malak Al Qudah (Id: 116223), Pharmacogenetic Characteristics Of Multiple Sclerosis Patients In Jordan.

Bashar Malkawi (Id: 118212), Genetic Characteristics Of Breast Cancerpatients In Jordan.

Saif Alahmad (Id: 128111), Effect Of Synthetic Cannabinoids On The Behavior Of Brain Endothelial Cells In A Clinically Relevant Model.

Nema Alserhan (Id: 128660), Association Between The Genetic Polymorphisms Of 5-Httlpr And Drd4 Exon Iii Variable Number Tandem Repeats And Epilepsy Susceptibility Among Jordanian Population.

Salma Darabseh (Id: 121727), Detection Of Vitamin D Receptor And Vitamin D Metabolic Pathway Gene Polymorphisms In Multiple Sclerosis Patients In A Jordanian Population

Islam Alkhaldi (Id: 128389), Pharmacogenomics Of Jordanian Hypertensive Patients.

Isra'a Omari (Id: 111432), Investigation On The Cytogenetic Effects Of Psychotic Drugs What Are We Missing.

Namarg Mohammad (Id: 111421), Genetic Polymorphisms Of Pharmacogenomic Vip Variants In The Circassian Population From Jordan.

Asaad Ataa (Id: 130743), Genetic Association Of Cyp2r1, Dpb, And Cyp27b1 Genes Related To The Vitamin D Metabolic Pathway Of Multiple Sclerosis Patients In A Jordanian Population.

Sara Al-Khaldi (Id: 128657), Ace Gene Polymorphism And Susceptibility To Hypertension In A Jordanian Population

Maryam Alasmar (Id: 146417), Association Of Nos3, Il-1ra, Hla-G And Pde3a Gene Variants With Hypertension In Jordanian Population

Malek Alnemri (Id: 150140), Exploring The Effect Of Synthetic Cannabinoid (Xlr-11) Oncorectal Cancer Cells

Haneen Ali (Id: 149617), Genetic Polymorphisms Among Jordanian Breast Cancer Patients : A Genetic Association Study

Namaa Abuseini (Id: 143189), Genetic Association Of Apobec3b, Hla-G, And Tert Gene Polymorphisms With Breast Cancer Susceptibility Among Jordanian Women

Fanar Alsmarat (Id: 149995) The Association Of Genetic Variants In Fibroblast Growth Factor Receptor 1 (Fgfr1) With The Risk Of Poor Glycemic Control In Type Two Diabetes Mellitus Patients.

Rawan Abusirdaneh (Id: 143364), Molecular And Pharmacological Profiling Of Synthetic Cannabinoids Ab-Fubinaca And 5-Fluoro Abica And Their Effects On The Brain Angiogenesis

Hanah Abokhormah (Id: 145953), The Effect Of The Synthetic Cannabinoids Emb-Fubinaca And Ab-Chminaca On The Roles Of Vascular Endothelial Growth Factor, Angiopoietin-1, And Angiopoietin-2 In The Brain Angiogenesis

Mishaal Alkhawaldeh (Id: 150133), Impacts Of The Synthetic Cannabinoids 5- Fluoro Adbica And Mdmb-Fubinaca On The Brain Angiogenesis And The Expression Of Vascular Endothelial Growth Factors, Angiopoietin-1, And Angiopoietin-2



## As A Co-Advisor

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Surayya Idris (Id: 97893), Detection Of Plasmid-Mediated Quinolone Resistance Genes In Urinary Klebsiella Pneumoniae Isolates From Jordan.

Rafeef Kafesha (Id: 105718), Effect Of Magnetized Water On The Growth And Development Of Tobacco Nicotiana Tabacum Var Turkish.

Bayan Obeidat (Id: 105635), Genetic Association Of Pax9 Gene Polymorphisms With Peg-Shape Tooth Disorder In Jordanian Arab Population.

Razan Hawamdeh (Id: 105633), Genetic Association Of Msx1 Gene Polymorphisms With Peg-Shape Tooth Disorder In Jordanian Population.

Haneen Al-Maqableh, Genetic Polymorphisms Of Pharmacogenomic Vip Variants In The Chechen Population From Jordan.

Nada Abudheim (Id: 105643), Genetic Analysis Of Candidate Genes Of Glaucoma In Jordanian Population.

Rabaa Al-Atamnah (Id: 116328), Role Of Oxidative Stress In Melatonin Effect In Reversing Learning And Memory Impairment Induced By Highfat Diet.

Haneen Saraireh (Id: 111435), The Effect Of Androgen Treatment On The Gene Expression And Function Of Cardiac Neurotrophins.

Lara Smadi (Id: 116331), Vitamin E Protects Against Cisplatininduced Genotoxicity In Human Lymphocytes.

Ala'a Majd (Id: 111438), The Effect Of Melatonin On The Expression Of Neurophins In The Hippocampus Of High Fat Diet Rats.

Ala'a Al-Mostafa (Id: 131029), Investigation Of The Effect Of Syntheticcannabinoids On Dna Of Human Lymphocytes.

Eman Hindawi (Id:129093), Evaluation Of The Possible Protective Effect Of Vitamin B12 On Chromosomal Damage Induced By Carbamazepine In Human Lymphocyte.

Montaha Khodour (Id:130285), Evaluation Of Vitamin E Effect On Human Lymphocytes Genotoxicity Induced By Nedaplatin.

Tamem Alghraibeh (Id:121891), Pathological, Immunological And Molecular Study Of Small Ruminant Lentivirus

With Emphasis On Maedi Visna Virus In Sheep In Northern Jordan.

Khadega Maasher (Id: 150899), Gene Expression Of Lymphoid Enhancer Binding Factor 1 Isoforms In Acute Leukemia Patients In Jordan

Muhsen Al-Diabat (Id: 150144), Tumor Expression Of Met And Pdl1 And Its Impact On Clinicopathologic Features And Blood Biomarkers In Patients With Solid Cancers: An Insight Into Molecular And Pathologic Pathways

Moath Al-Shorman (Id: 146414), Tumor Expression Of Egfr And Pd-L1 And Its Impact On Clinicopathologic Features And Blood Biomarkers In Patients With Solid Cancers: An Insight Into Molecular And Pathologic Pathways

Fadwa Hawawreh (Id: 146415), Effect Of Enriched Environment On Neurotrophic Factors Level In The Adult Rats' Brains Following Neonatal Noxious Stimulation

Suhaib Al-Sendyani (Id: 143447), Investigating The Effect Of The Novel Synthetic Cannabinoid "Xlr-11" On Prostate Cancer Cells

Aqdas Naser (Id: 150149), Unraveling The Impact Of Estrogen On Cct2 Expression In Er-Positive Breast Cancer: Stimulation And Inhibition Insights

Rania Alsamameha (Id: 158643), Investigating Llt1 And Cd161 Expression In Hodgkin's Lymphoma: Relation To Tumor Microenvironment Cells, And Patient's Outcome

## As Internal Examiner

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Dalal Mansi, M.Sc., "Effects of extremely low frequency electromagnetic field and electric current on breast cancer cells induced with 712- dimethylbenzaanthracene in Wister rats".

Mohammed Al-Quasmi, M.Sc., "Evaluation of DNA damage induced by phosphodiesterase type 5 inhibitors pde5-Is sildenafil tadalafil and vardenafil".

Aisha Magaji, M.Sc., "Invitro investigation of the antibacterial activities of some fluoroquinolones against Pseudomonas Aeruginosa biofilms".

Samer Abed, M.Sc., "The investigation of the impact of toxic doses of the antipsychotic drug chlorpromazine on the development of redtailed flesh fly Sarcophaga haemorrhoidal is native to Jordan, and possible utilizations in estimation of death time for legal investigations".

Rawan Khsaawnh, M.Sc., "The effect of exposure to waterpipe smoke on body weight and organs in animal model"

Rana Al-Hakimi, M.Sc., "Antibiotic resistance and enterotoxin genes in Staphylococcus Aureus isolates from dairy cattle sheep and goat bulk milk in Jordan".

Sara Alsharif, M.Sc., "Preparing buccal chitosan nanoparticles using ionic gelation method".

Fatima Al-Jamal, M.Sc., "The protective effect of cerebrolysin on improving the memory and cognitive impairments induced by sleep deprivation".

## As an external Examiner

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Raed Ootom, M.Sc., "Screening for mutations in Exons 9 and 20 of PIK3CA gene in prostate cancer", Yarmouk University, Jordan.

Robert Pearce, Ph.D., "Investigation of the molecular pathology of dupuytren's disease", The University of Notre Dame, Australia.

Heba Ramadan, M.Sc. Cloning, Sequence Analysis, and Expression Profile of a Superoxide Dismutase Gene from Lentil, AlBalqa Applied University.

Ohoud Ajeel, MSc., Arabian Gulf University, Bahrain

## Non-Academic Achievements

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- Workshop Tackles Biotechnology and Biosafety in Jordan
- Expertise in DNA: Jordan
- A Fellowship for Scientists in the Middle East Builds Safety and Security Across Borders
- End Rabies: Collaborate, Vaccinate
- JUST Newsletter, February Issue
- Director of Princess Haya Center for Technologies visits the US State Department
- Training workshop on "Biorisk Management" at the University of Science and Technology
- Under the patronage of Hazza Bin Zayed. The Arab Gulf Forensic Science Conference launched in Abu Dhabi
- Five Research Grants Get the Most Support from the Scientific Research Support Fund at Ministry of Higher Education.
- Advanced Molecular PCR Workshop at Princess Haya Biotechnology Centre
- Dr. Laith Nasser Al-Eitan gets the gold medal

## Volunteering (Community Services)

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- Participated in donating to “Himmat Watan”
- Coronavirus relief fund, to support Jordan’s national efforts, led by His Majesty King Abdullah II, to combat the COVID-19 crisis and alleviate its economic and social repercussions on the Kingdom.
- Participated and giving a public speech on Awareness and Preparedness of COVID-19 Outbreak among Healthcare Workers and Other Residents in my City in AlMafrq Jordan.
- Participated and giving a workshop on Rule of Law for general public and Faculty members and administrative staff universities.
- Participated in community programs, and gave lectures on Substance Abuse, Joker Addiction, Genetic of Autism, Pharmacogenomics Application in Personalized Medicine and Forensic Toxicology for the general public.
- Lecturing and mentoring for faculties members from different Jordanian Universities for building a research bioethics culture in Jordan under “International Research Ethics Education and Curriculum Development for Developing Countries (Jordan)”. Sponsor/Agency: National Institute of Health, the Fogarty International Center/via University of California/San Diego (UCSF), USA. 2015 to 2020.
- Conducting multiple workshops in Molecular Diagnosis (1st, 2nd, 3rd levels in PCR) and Global Biorisk Management Curriculum (1st, 2nd, 3rd levels in GBRMC) for health care workers at the Jordanian Ministry of Health (JMOH) and Royal Medical Services (RMS).
- Signing agreements with different countries (UK, USA, and Canada) for collaboration to conduct workshops in Biorisk Management and PCR Molecular Diagnosis at National level for the first time for Royal Jordanian Medical Service (RMS) and Jordanian Health of Ministry (JMOH) and at international level for Health Ministry of Yemen, Iraq, Libya, and Kurdistan Al-Iraq.
- Evaluating different research proposals for Shoman Research Fund and Jordanian Universities in Jordan.
- Participation in the blood donation campaign at King Abdullah Gardens-Irbid in corporation with the ministry of health-April 2019.
- Participation in a blood donation campaign at JUST to support blood banks with the urgent blood units for Syrian refugees.

## Language Skills

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<b>Mother tongue</b>	Arabic
<b>Other language</b>	English
	Listening C2 Reading C2 Writing C2
	Spoken Production C2 Spoken Interaction C2
<b>Levels</b>	A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## Digital Skills

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- Primer 3 software
- Chromas Pro software
- Basic Local Alignment Search Tool (BLAST) Haploview
- SNPSTAT
- Computational R Package (RnBeads)
- Omega MARS
- Sequenom MassARRAY system
- MassARRAY assay design software
- SpectroTYPER-RT
- ClustalW
- Burrow-Wheeler Aligner
- Tablet
- SAMtools
- Gene Ontology (GO) Consortium
- Enrichment Analysis
- The Signaling Network Open Resource
- KEGG and Reactome pathway analysis
- IBM SPSS Statistics
- Microsoft Office

## References

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